

# Patterns of substance use and associated mental health outcomes among university students in urban Malaysia

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**Background:** Substance use among young adults is a growing public health concern in Malaysia, with increasing evidence of co-occurring mental health conditions. This study aimed to determine the prevalence and patterns of substance use and to examine its association with anxiety and depressive symptoms among university students in urban settings. **Methods:** A cross-sectional study was conducted from March to May 2024 involving 1,200 undergraduate students from three public universities in Kuala Lumpur and Selangor. Participants completed a self-administered online questionnaire that included the WHO ASSIST (Alcohol, Smoking and Substance Involvement Screening Test) and the DASS-21 (Depression, Anxiety, and Stress Scale). Descriptive statistics, chi-square tests, and multivariable logistic regression analyses were performed using SPSS version 29. Ethical approval was obtained from the institutional research ethics committee, and electronic informed consent was secured from all participants. **Results:** The overall prevalence of current substance use was 22.4%, with cannabis (10.8%) and alcohol (8.7%) being the most commonly reported substances. High-risk substance users had significantly higher odds of reporting moderate-to-severe anxiety (aOR 2.89; 95% CI: 1.94–4.32) and depressive symptoms (aOR 2.35; 95% CI: 1.61–3.43). The association remained significant after adjusting for gender, academic performance, and social support. **Conclusion:** Substance use is relatively common among urban university students and is significantly associated with adverse mental health outcomes. Early screening and targeted mental health interventions should be integrated into university health services to address this dual burden.